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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,835	12/12/2003	Richard D. Breault	C-3303	1950

7590

07/26/2006

M. P. Williams  
210 Main Street  
Manchester, CT 06040

EXAMINER
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KALAFUT, STEPHEN J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/734,835	<b>Applicant(s)</b> BREault, RICHARD D.	
	<b>Examiner</b> Stephen J. Kalafut	<b>Art Unit</b> 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-8 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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Claims 1-5 and 9-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims recite a “freezing temperature”, but do not recite the material that exhibits the freezing temperature. Claims 1 and 2 recite that the water accumulator is “within a fuel cell power plant”, but no process steps or recited components include the fuel cell. Thus, whether the complete power plant must be present in order for these claims to be met cannot be determined. Likewise, whether a vehicle must be present for claim 12 is unclear, because

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Salyer (US 2001/0028791).

Salyer discloses a device for heating stored water, comprising a water reservoir (20), which would be a water accumulator, a keep warm heater (26), and vacuum insulation panels (16) surrounding the reservoir and heater (sections 0026-0028). All of these would be provided, as recited in claim 1. The heater is between the water reservoir and the insulation (figure 1), and is in thermal contact with the water via a phase-change material (46). When the temperature of the water decreases, i.e., approaches its freezing point, which would also approach the freezing

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point of the phase-change material, the heater (26) would activate, thus consuming power, in order to heat the phase-change material, and in turn the water (section 0038). These claims are interpreted as not requiring any fuel cell to be present.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun (US 5,599,636).

Braun discloses a battery (16) that is surrounded by a vacuum insulation tent (column 12, lines 24-29), which would comprise vacuum insulation panels. Also within the housing is a transistor (10) that gives off heat when the battery temperature decreases (column 8, lines 20-27), thus functioning as a keep warm heater. The transistor obtains its power from the battery (abstract, lines 3-5). Thus, the means for powering the heater and the DC power source are the same thing. These claims do not recite maintaining, or means to maintain, the battery at a temperature where it has at least half its power capacity, which is understood to mean that power capacity varies with temperature. However, since skilled artisan would be familiar with the effect of temperature on battery performance, determining an optimal lower temperature threshold in relation to battery power output would be within the skill thereof. For this reason, these claims would be obvious over Braun. Claim 12 is interpreted as not requiring the vehicle

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to be present. However, this claim would be obvious if the vehicle is required, since the use of batteries to start gasoline-powered cars is conventional in the automotive art.

Claims 6-8 are allowed. The prior art cited herein or mentioned in the application does not disclose a fuel cell power plant that includes the water accumulator and DC power source, each with the recited heater and vacuum insulation panels; or the fuel cell power plant with a water accumulator that includes a temperature sensor and a microwave heater.

Claim 5 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The prior art does not disclose the combination of a water accumulator and a DC power source, each with its respective keep warm heater and vacuum insulation panels, where the DC power source provides power to the heater that heats the water in the accumulator.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hasenauer (US 5051322) and Cairns *et al.* (US 3823037) disclose batteries with housings that include vacuum insulation. Salvador *et al.* (US 6,432,568) discloses a fuel cell with a water tank that has a resistive heater. Breault (US 2005/0084735) is the Pre-Grant Publication of Serial No. 10/687,010, mentioned in the present application.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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GROUP 1700